NON-PUBLIC?: N
ACCESSION #: 9403040148
LICENSEE EVENT REPORT (LER)

FACILITY NAME: Susquehanna Steam Electric Station - PAGE: 1 OF 3
Unit 2

DOCKET NUMBER: 05000388

TITLE: Reactor Scram Following Turbine Trip on Loss of Generator
Stator Cooling
EVENT DATE: 01/20/94 LER #: 94-002-00 REPORT DATE: 02/22/94

OTHER FACILITIES INVOLVED: DOCKET NO: 05000

OPERATING MODE: 1 POWER LEVEL: 100

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR
SECTION:
50.73(a)(2)(iv)

LICENSEE CONTACT FOR THIS LER:
NAME: Richard R. Wehry, Power Production TELEPHONE: (717) 542-3664
Engineer - Compliance

COMPONENT FAILURE DESCRIPTION:
CAUSE: X SYSTEM: TJ COMPONENT: TIK MANUFACTURER: F120
REPORTABLE NPRDS: YES

SUPPLEMENTAL REPORT EXPECTED: NO

ABSTRACT:

At 0150 hours on January 20, 1994, with Unit 2 in Condition 1 at 100% power, a reactor scram occurred, per design, when the Main Turbine tripped due to a loss of main generator stator cooling. Reactor water level dropped to + 2 inches. Reactor Level 3 isolations occurred per design. Reactor pressure peaked at 1083 psig, momentarily cycling Safety Relief Valves A, B, C, D, H, R and S. All Primary Containment parameters remained normal throughout the event. The loss of generator stator cooling was caused by failure of mechanical linkage in a controller for a temperature control valve on the stator cooling water system. Failure of the controller resulted in the temperature control valve closing, resulting in loss of cooling water flow to the generator stator. The plant was safely shutdown and there were no safety consequences or compromise to public health or safety during this event, nor would there

have been under different initial operating conditions. This transient is within the bounds of a turbine tr
p as analyzed in Chapter 15 of the
FSAR. The controller was repaired and the unit was returned to operation. Investigations into longer term actions to prevent recurrence are in progress.

END OF ABSTRACT

DESCRIPTION OF EVENT

At 0150 hours on January 20, 1994, with Unit 2 in Condition 1 at 100% power, a Reactor Protection System (RPS; EIIS Code: JC) actuation occurred when the Main Turbine (EIIS Code: TA) tripped on loss of Main Generator stator cooling (EIIS Code: TJ). All control rods inserted fully. Reactor water level dropped to + 2 inches and Level 3 isolations occurred per design. Reactor pressure peaked at 1083 psig, momentarily cycling Safety Relief Valves (EIIS Code: SB) A, B, C, D, H, R and S. All Primary Containment parameters remained normal throughout the event.

CAUSE OF EVENT

The reactor scram was caused by a turbine control valve fast closure as a result of loss of main generator stator cooling. The loss of generator stator cooling was caused by failure of mechanical linkage (see attached figure) in a controller for a temperature control valve on the stator cooling water system. Failure of the controller resulted in the temperature control valve closing, resulting in loss of cooling water flow to the generator stator. The cause of failure of the mechanical linkage has not been determined.

REPORTABILITY/ANALYSIS

This event was determined to be reportable per 10CFR50.73(a)(2)(iv), in that an unplanned Engineered Safety Feature (ESF) actuation occurred when the RPS initiated an automatic reactor scram following turbine control valve fast closure with power greater than 24%. All major equipment operated per design during the transient, ECCS was not challenged and no abnormal operator actions were required to place the unit in a stable condition. The plant was safely shutdown and there were no safety consequences or compromise to public health or safety during this incident, nor would there have been under different initial operating conditions. The transient was within the bounds of a turbine trip as analyzed in Chapter 15 of the FSAR.

In accordance with the guidance provided in NUREG 1022 Supplement 1 item 14.1 and 10CFR50.4(d), the required submission date for this report was determined to be February 22, 1994.

CORRECTIVE ACTION

Repairs were made to the temperature indicating controller and the unit was returned to operation.

Investigations into longer term actions to prevent recurrence, including potential design changes, are in progress.

ADDITIONAL INFORMATION
Failed Component Identification:

Component: Temperature Indicating Control Station

Manufacturer: Fischer & Porter Co.

Model: 1451

Figure omitted.

Previous Similar Events: None

Pennsylvania Power & Light Company
Two North Ninth Street o Allentown, PA 18101 o 215 / 770-5151

February 22, 1994

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

SUSQUEHANNA STEAM ELECTRIC STATION
LICENSEE EVENT REPORT 94-002-00
FILE R41-2
PLAS -591

Docket No. 50-388
License No. NPF-22

Attached is Licensee Event Report 94-002-00. This report was determined reportable per 10CFR50.73(a)(2)(iv), in that an unplanned Engineered Safety Feature actuation occurred when the Reactor Protection System initiated an automatic reactor scram following a main turbine trip on loss of generator stator cooling.

H. G. Stanley
VP Nuclear Operations

RRW/mjm

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